

Comparisons of Job Characteristics

Focus Occupation: [Mechanical Engineers \(17-2141\)](#)
Associated Occupation: [Mechanical Drafters \(17-3013\)](#)

[Compare Knowledge](#)
[Compare Skills](#)
[Compare Abilities](#)
[Compare Detailed Work Activities](#)
[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge

Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Mechanical Engineers (17-2141)
Associated Occupation: Mechanical Drafters (17-3013)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Design	5.2	22.0	21.0	0	Current knowledge level may be sufficient
Engineering and Technology	5.7	17.6	21.5	>>	Current knowledge level is likely more than sufficient
Mathematics	9.2	13.0	18.1	>>	Current knowledge level is likely more than sufficient
Mechanical	6.8	12.4	18.1	>>	Current knowledge level is likely more than sufficient
Physics	4.3	8.3	15.3	>>	Current knowledge level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills

Similarity of Focus Occupation to Associated Occupation: 75

Focus Occupation: Mechanical Engineers (17-2141)
Associated Occupation: Mechanical Drafters (17-3013)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Mathematics	6.2	10.6	15.3	>>	Skill level is likely more than sufficient
Operations Analysis	5.0	8.6	13.0	>>	Skill level is likely more than sufficient
Technology Design	2.6	6.0	11.0	>>	Skill level is likely more than sufficient
Programming	2.2	5.8	7.5	>	Skill level is likely sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities

Similarity of Focus Occupation to Associated Occupation: 94

Focus Occupation: Mechanical Engineers (17-2141)

Associated Occupation: Mechanical Drafters (17-3013)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Near Vision	11.1	12.7	13.3	0	Current ability level may be sufficient
Visualization	7.5	11.7	12.7	0	Current ability level may be sufficient
Mathematical Reasoning	6.3	11.1	15.7	>>	Current ability level is likely more than sufficient
Flexibility of Closure	7.8	9.9	10.3	0	Current ability level may be sufficient
Finger Dexterity	7.6	9.7	7.1	<<	Extensive improvement in abilities may be required
Originality	7.6	9.6	11.5	>	Current ability level is likely sufficient
Fluency of Ideas	7.6	9.4	10.6	>	Current ability level is likely sufficient
Number Facility	6.3	9.3	13.0	>>	Current ability level is likely more than sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common

Similarity of Focus Occupation to Associated Occupation: 92

Focus Occupation: Mechanical Engineers (17-2141)

Associated Occupation: Mechanical Drafters (17-3013)

Work Activities	Exclusivity of Activity
Analyze technical data, designs, or preliminary specifications	47
Analyze test data	64
Collect scientific or technical data	30
Communicate technical information	4
Confer with engineering, technical or manufacturing personnel	25
Create mathematical or statistical diagrams or charts	43
Direct and coordinate activities of workers or staff	3
Draw prototypes, plans, or maps to scale	57
Evaluate engineering data	60
Examine engineering documents for completeness or accuracy	62
Follow manufacturing methods or techniques	73
Prepare technical reports or related documentation	22
Read blueprints	10
Read schematics	34
Read technical drawings	7
Understand engineering data or reports	48
Use computer aided drafting or design software for design, drafting, modeling, or other engineering tasks	58
Use drafting or mechanical drawing techniques	50
Use government regulations	44

Use spreadsheet software	18
Work as a team member	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common

Similarity of Focus
Occupation to Associated
Occupation: 65

Focus Occupation: Mechanical Engineers (17-2141)
Associated Occupation: Mechanical Drafters (17-3013)

Tools and Technologies	Exclusivity
Business function specific software	1
Computer data input devices	2
Computer printers	2
Computers	1
Content authoring and editing software	1
Data management and query software	1
Industry specific software	1

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.